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JOSEPH S. TRIPOLI  
THOMSON MULTIMEDIA LICENSING INC.  
2 INDEPENDENCE WAY  
P. O. BOX 5312  
PRINCETON, NJ 08543-5312

EXAMINER

JONES, HEATHER RAE

ART UNIT PAPER NUMBER

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Please find below and/or attached an Office communication concerning this application or proceeding.



## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-27 are rejected under 35 U.S.C. 102(e) as being anticipated by Alex (U.S. Patent 6,429,984).

Regarding claim 1, Alex discloses a method of automatically refreshing previously recorded data on a recordable storage medium during playback of the previously recorded data from the recordable storage medium comprising the steps of: reading a segment of the previously recorded data from the recordable storage medium; and re-writing at least a portion of the segment of the previously recorded data back onto the recordable storage medium (Fig. 4; abstract; col. 6, lines 25-35).

Regarding claim 2, Alex discloses all the limitations as previously discussed with respect to claim 1 including that the previously recorded data is refreshed within a data retention period (col. 2, lines 61-65; col. 2, line 67 – col. 3, line 3; col. 7, lines 9-17; col. 10, line 66 – col. 11, line 4).

Regarding claim 3, Alex discloses all the limitations as previously discussed with respect to claim 1 including that the portion of the segment of the previously recorded data that is re-written to the recordable storage medium corresponds to the segment of the previously recorded data that was read from the recordable storage medium (col. 2, lines 16-26; col. 6, lines 25-31).

Regarding claim 4, Alex discloses all the limitations as previously discussed with respect to claims 1 and 4 including that the segment of recorded data read from the recordable storage medium and the portion of the segment of the recorded data that is re-written onto the recordable storage medium is at least one error correction coding (ECC) block (col. 4, lines 15-28).

Regarding claim 5, Alex discloses all the limitations as previously discussed with respect to claim 1 including that the data previously recorded onto the recordable storage medium produces a maximum bitstream rate during the playback of the previously recorded data and the combined rate of the reading and the re-writing steps is at least twice that of the bitstream rate (col. 6, lines 18-31).

Regarding claim 6, Alex discloses all the limitations as previously discussed with respect to claims 1 and 5 including that the rate of the reading steps is substantially equal to the rate of the re-writing step (col. 6, lines 18-31).

Regarding claim 7, Alex discloses all the limitations as previously discussed with respect to claim 1 including that the reading step further comprises the step of reading the segment of the previously recorded data from

the recordable storage medium at an original location and the re-writing step further comprises the step of re-writing at least a portion of the segment of the previously recorded data back onto the recordable storage medium at the original location (Fig. 4; col. 6, lines 25-31).

Regarding claim **8**, Alex discloses all the limitations as previously discussed with respect to claims 1 and 7 including that the portion of the segment of the previously recorded data re-written back onto the recordable storage medium is re-written at a new location on the recordable storage medium (col. 6, lines 25-31).

Regarding claim **9**, Alex discloses all the limitations as previously discussed with respect to claim 1 as well as disclosing the step of providing a recordable storage medium device to perform the reading and re-writing steps, wherein the reading and re-writing steps are performed while the recordable storage medium device is not in a user initiated mode (col. 6, lines 13-15).

Regarding claim **10**, Alex discloses all the limitations as previously discussed with respect to claim 1 as well as disclosing that the step of selectively examining the segment of the previously recorded data by searching the errors in the segment of previously recorded data, wherein the re-writing step is performed only if the level of errors in the segment of previously recorded data reaches a predetermined level (col. 8, lines 18-23; col. 11, lines 5-13).

Regarding claim **11**, Alex discloses a method of automatically refreshing data recorded on a recordable storage medium during playback of the recorded

data comprising the steps of: creating a file directory for listing when at least one segment of the data recorded on the recordable storage medium (Figs. 5 and 6; col. 6, line 54 – col. 7, line 17); reading the segment of the recorded data from the recordable storage medium; and, when the reading step occurs after a predetermined elapsed time from the creating step re-writing at least a portion of the segment of the record data on the recordable storage medium (Fig. 4; abstract; col. 2, lines 61-65; col. 2, line 67 – col. 3, line 3; col. 6, lines 25-35; col. 7, lines 9-17; col. 10, line 66 – col. 11, line 4).

Regarding claim **12**, Alex discloses all the limitations as previously discussed with respect to claim 11 including that the predetermined elapsed time occurs within a data retention period (col. 2, lines 61-65; col. 2, line 67 – col. 3, line 3; col. 7, lines 9-17; col. 10, line 66 – col. 11, line 4).

Regarding claim **13**, Alex discloses a method of automatically refreshing data recorded onto a recordable storage medium during playback of the recorded data comprising the steps of: reading a segment of the previously recorded data from the recordable storage medium; jumping back to re-read the segment if the number of errors in the segment reaches a first predetermined level; and, re-writing at least a portion of the segment of the previously recorded data back onto the recordable storage medium if the number of jump-backs reaches a second predetermined number (Fig. 4; abstract; col. 6, lines 25-35; col. 8, lines 18-38; col. 11, lines 5-13).

Regarding claims **14-23**, these are apparatus claims corresponding to the method claims 1-10. Therefore, claims 14-23 have been analyzed and rejected as previously discussed with respect to claims 1-10.

Regarding claim **24**, this is an apparatus claim corresponding to the method claims 11 and 12. Therefore, claim 24 has been analyzed and rejected as previously discussed with respect to claims 11 and 12.

Regarding claim **25**, this is an apparatus claim corresponding to the method claim 13. Therefore, claim 25 has been analyzed and rejected as previously discussed with respect to claim 13.

Regarding claim **26**, grounds for rejecting claims 11 and 12 apply for claim 26 in their entirety. Furthermore, Alex discloses data being recorded on a plurality of recordable storage media and selecting one of the recordable storage media to perform automatic refreshes (Fig. 3).

Regarding claim **27**, grounds for rejecting claim 12 apply for claim 27 in its entirety.

### ***Conclusion***

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Ng et al. (U.S. Patent 5,278,838) discloses complete rebuilding of data in a parity group of disk drives to a fault tolerant state after detecting loss or degradation of the fault tolerant state by a partially or wholly failed disk drive in a parity array of disk drives.

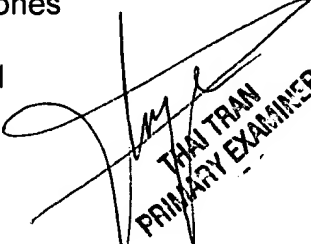
- b. Bopardikar et al. (U.S. Patent 6,404,975) discloses detecting disk failure and in response to this detection missing data is regenerated from the parity information.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Heather R. Jones whose telephone number is 571-272-7368. The examiner can normally be reached on Mon. - Thurs.: 7:00 am - 4:30 pm, and every other Fri.: 7:00 am - 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thai Tran can be reached on 571-272-7382. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Heather R Jones  
Examiner  
Art Unit 2621

  
THAI TRAN  
PRIMARY EXAMINER